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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/733,274	12/12/2003	Thomas Schaefer	24580SUS0CONT	8253

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ALEXANDRIA, VA 22314

EXAMINER

MEDINA SANABRIA, MARIBEL

ART UNIT	PAPER NUMBER
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1754

DATE MAILED: 03/03/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

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Office Action Summary	Application No.	Applicant(s)	
	10/733,274	SCHAEFER ET AL.	
	Examiner	Art Unit	
	Maribel Medina	1754	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 12 December 2003.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1,2 and 4-8 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1,2,4-8 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☒ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 12 December 2003 is/are: a) ☐ accepted or b) ☒ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☒ Certified copies of the priority documents have been received in Application No. 09/903,777.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|---|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date <u>12/12/03;3/12/04</u> . | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Double Patenting

1. The nonstatutory double patenting rejection is based on a judicially created doctrine grounded in public policy (a policy reflected in the statute) so as to prevent the unjustified or improper timewise extension of the "right to exclude" granted by a patent and to prevent possible harassment by multiple assignees. See *In re Goodman*, 11 F.3d 1046, 29 USPQ2d 2010 (Fed. Cir. 1993); *In re Longi*, 759 F.2d 887, 225 USPQ 645 (Fed. Cir. 1985); *In re Van Ornum*, 686 F.2d 937, 214 USPQ 761 (CCPA 1982); *In re Vogel*, 422 F.2d 438, 164 USPQ 619 (CCPA 1970); and, *In re Thorington*, 418 F.2d 528, 163 USPQ 644 (CCPA 1969).

A timely filed terminal disclaimer in compliance with 37 CFR 1.321(c) may be used to overcome an actual or provisional rejection based on a nonstatutory double patenting ground provided the conflicting application or patent is shown to be commonly owned with this application. See 37 CFR 1.130(b).

Effective January 1, 1994, a registered attorney or agent of record may sign a terminal disclaimer. A terminal disclaimer signed by the assignee must fully comply with 37 CFR 3.73(b).

2. Claims 1, 2, and 4-8 are rejected under the judicially created doctrine of obviousness-type double patenting as being unpatentable over claims 1-7 of U.S. Patent No. 6,743,407. Although the conflicting claims are not identical, they are not patentably distinct from each other because the claims of the patent anticipate the instant claims.

Claim Rejections - 35 USC § 103

3. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

4. Claims 1-2, and 4-8 are rejected under 35 U.S.C. 103(a) as being unpatentable over US Patent No. 3,379,500 (Albanese et al).

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Albanese et al disclose a process for the synthesis of hydrogen cyanide comprising reacting ammonia, methane, nitrogen and oxygen in the presence of nets of catalysts selected from the group consisting of metals of the platinum group and alloys thereof (See col. 1, lines 14-21). The oxygen and nitrogen are present in a molar ratio which satisfies the relationship $[O_2]/[N_2+O_2] > 0.21$ up to 0.40 (See col. 2, lines 40-45). Methane and ammonia are present in a molar ratio of $[CH_4]/[NH_3]$ from 1.4 to 1.05 (See col. 2, lines 50-55).

The only difference between the instantly claimed invention and Albanese et al is that Albanese et al fail to disclose that a "molar ratio of ammonia to the sum of oxygen and nitrogen obeys the following relationship: $Y = m \cdot X - a$ wherein: $Y = [NH_3]/[N_2+O_2]$; $X = [O_2]/[N_2+O_2]$; $m = 1.25$ to 1.40 ; and $a = 0.05$ to 0.14 ."

It would have been obvious to one of ordinary skill in the art at the time the invention was made to have determined by experimentation and mathematical methods the relationship between the concentrations of ammonia and oxygen as instantly claimed since this a very common and known method of comparison used widely in the art.

In regards to claim 5, Albanese et al disclose in col. 4, lines 40-44, that the feeding gas is preheated to 110°C. In regards to claim 6, Albanese disclose that ammonia and methane are controlled as a function of $[O_2]/[N_2+O_2]$ (See col. 3, lines 35-40).

In regards to claim 8 Albanese fail to disclose the use of an Andrussov reactor, However, it would have been obvious to one of ordinary skill in the art at the time the invention was made to have used an Andrussov reactor since this a well known type of reactor used in the production of hydrogen cyanide from, methane, ammonia and oxygen-containing gaseous streams.

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In regards to the limitation of claim 7 that reads “ wherein said methane-containing natural gas contains at least 88 vol.% of methane” Albanese et al clearly discloses in col. 5, lines 1-3, that “gaseous mixtures containing at least 90% of CH₄, in particular natural gas” can be used.

Claim Objections

5. Claim 1 is objected to because of the following informalities:

- a. in line 2, “membrane” should be changed to --methane--
- b. in line 8, after “1.05;”, --and-- should be inserted.

Appropriate correction is required.

Drawings

6. The drawings are objected to because: The identifier "Fig. 1" should be deleted. See 37 CFR 1.84 (u) (1) *"Where only a single view is used in an application to illustrate the claimed invention, it must not be numbered and the abbreviation "FIG." Must not appear."* Correction is required.

Specification

7. The disclosure is objected to because of the following informalities: in page 6, line 28, “Fig. 1” should be changed to –The Figure--. Appropriate correction is required.

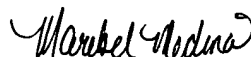
Conclusion

8. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Maribel Medina whose telephone number is (571) 272-1355. The examiner can normally be reached on Monday through Friday from 7:30 AM to 4:00 PM.

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If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Stanley Silverman can be reached on (571) 272-1358. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).


Maribel Medina
Examiner
Art Unit 1754